

Weather Note

RAPID INTENSIFICATION OF HURRICANE CLEO, AUGUST 1964

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Hurricane Cleo, moving northward, crossed Cuba and was over the water south of Miami on August 26, 1964 [1]. Reconnaissance aircraft were in or near the eye of the hurricane almost continuously on that date. The intensity, as indicated by their central pressure reports, remained constant at 984 mb. for 6 hr. during the afternoon and evening. As the center approached the Miami area, rapid intensification occurred. The lowest pressure in North Miami was 971 mb. This intensification caused the maximum winds to increase from 85 m.p.h. to around 105 m.p.h., or roughly an increase of 50 percent in wind force.

Figures 1 and 2 show the radar presentation at 3:00 p.m. and 11:15 p.m. EST August 26, 1964. Mr. Gordon E. Dunn, Chief Tropical Meteorologist, Homer Hiser and Harry Senn of the University of Miami's Radar Laboratory, and the Weather Bureau radar experts of Miami were asked which spiral overlay [2], the 10° or

20°, better fitted each picture. This was done without the person's knowing the reason for the question. All agreed that the 10° overlay fitted figure 1 better and that the 20° overlay fitted figure 2 better, especially in close to the eye. (Note the narrow clear area.) This increase of inward spiralling of the rain bands probably indicates the increase in the low-level flow and in the general intensity of the hurricane.

While this one case is anything but conclusive, it does indicate an avenue for further research, positive results of which would be invaluable.

REFERENCES

1. G. E. Dunn, "The Hurricane Season of 1964," *Monthly Weather Review*, vol. 93, No. 3, Mar. 1965, pp. 175-187.
2. H. Senn, H. Hiser, and E. Low, "Studies of Hurricane Spiral Bands Observed on Radar," *Final Report on Contract Cwb-8735*, University of Miami, Oct. 1956.

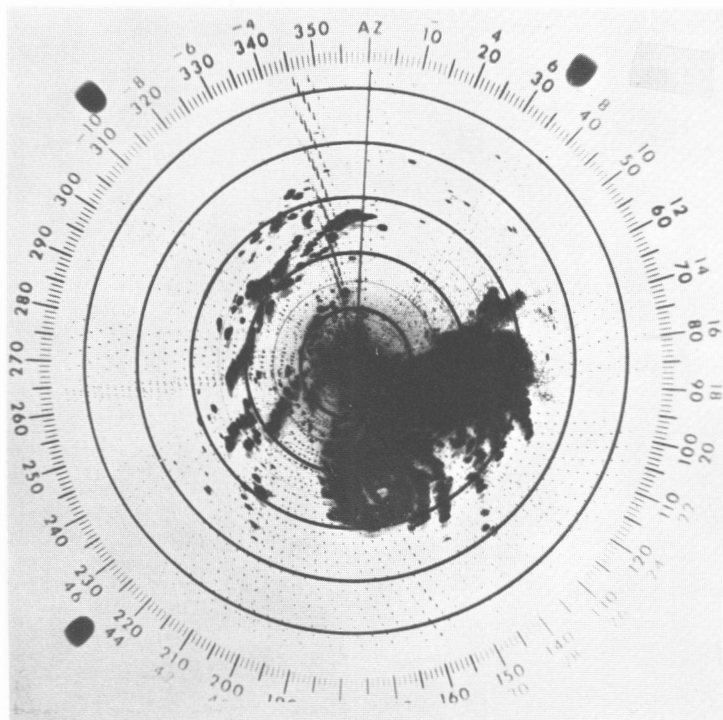


FIGURE 1.—Miami radarscope presentation of hurricane Cleo at 3:00 p.m. EST, August 26, 1964.

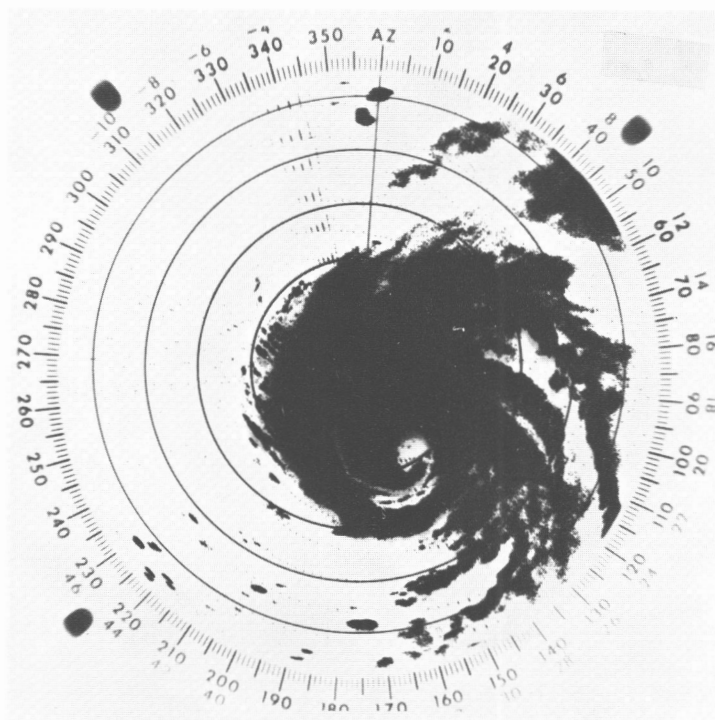


FIGURE 2.—Miami radarscope presentation of hurricane Cleo at 11:15 p.m. EST, August 26, 1964.